PHASE I CULTURAL RESOURCES RECONNAISSANCE SURVEY

PROPOSED ALTON PARKWAY EXTENSION PROJECT, INCLUDING BAKER RANCH, LAKE FOREST, CALIFORNIA

Prepared for

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USGS 7.5-Minute Quadrangle: El Toro, California
BonTerra Project No. Shea J003

Prepared by

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MANAGEMENT SUMMARY/ABSTRACT

PURPOSE AND SCOPE

BonTerra Consulting undertook this project as part of California Environmental Quality Act (CEQA) requirements for the proposed Alton Parkway Extension project. The Phase I Cultural Resources Reconnaissance Report addresses the remaining approximately 380 acres of the Baker Ranch. This cultural study includes a literature review/records search, Native American scoping, and a pedestrian reconnaissance of the project area. The format of this report follows *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (Office of Historic Preservation 1990).

DATES OF INVESTIGATION

BonTerra Consulting Archaeologist Patrick Maxon (see Appendix A: Personnel Qualifications), a Registered Professional Archaeologist (RPA), conducted the literature review at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on July 23, 2008. The cultural resources survey of the property was conducted on July 30, 2008 by Patrick Maxon and Justin Partridge of BonTerra. Mr. Maxon visited the Lake Forest Historical Society at Heritage Hill Historical Park on August 6, 2008. This report was completed in August 2008.

FINDINGS OF THE INVESTIGATION

In summary, four cultural resources (CA-ORA-40, CA-ORA-758, CA-ORA-1004 and CA-ORA-1150) are recorded within the Alton Parkway/Baker Ranch project area. CA-ORA-758, which was previously subject to data recovery excavation (Demcak 1994b), lies within the Alton Parkway Extension right-of-way. The remaining sites do not. CA-ORA-40 appears to have been completely destroyed. It is not known if CA-ORA-1004 and CA-ORA-1150 have been evaluated for significance.

Seven cultural resources studies have at least partially impinged on the current project area. Fifty-three cultural resources and 34 isolated artifacts are recorded within approximately 1 mile of the project area. Additionally, there have been 49 cultural resources investigations within a 1 mile radius.

The pedestrian survey was designed to revisit the known sites and to record any previously unknown sites located within the proposed Baker Ranch and Alton Parkway Extension development area.

No previously unknown sites were discovered during the current study.

INVESTIGATION CONSTRAINTS

Much disturbance has occurred throughout the property. Approximately 100 acres of the 380-acre Baker Ranch project area have been completely graded. An avocado orchard and other nursery operations exist on the property. Dense sage scrub vegetation and other modern disturbances obscure the majority of knolltops and other likely areas of cultural resources on the property.

RECOMMENDATIONS

As a point of clarification, these mitigation measures are identical, with minor variations, to those that appear in the Alton Parkway Extension Project Draft EIR Mitigation Monitoring and

Reporting Program (BonTerra Consulting 2007). Any modifications to these measures will be *italicized*.

Within Proposed Alton Parkway Extension

Cultural Resources Monitoring

Section 21083.2(i) of the CEQA Statutes and Section 15064.5(f) of the CEQA Guidelines provide for the accidental discovery of historical resources discovered during construction. Because of the three archaeological sites known to remain on the property, the general sensitivity of the project area for cultural resources and the possibility that unanticipated discoveries such as buried features (hearths, living floors, etc.) still exist in the subsurface (whether as part of the three known sites or a currently unknown site), it is recommended that monitoring of mass grading for this project be accomplished by a qualified Archaeologist who meets the Secretary of the Interior's Standards for Archaeologists (NPS 1983). In the event that cultural resources are exposed during construction, the Monitor must be empowered to temporarily halt construction in the immediate vicinity of the discovery while it is evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, additional work (such as preservation or data recovery excavation) may be warranted. A Registered Professional Archaeologist (RPA) should, at minimum, supervise any monitoring activities.

Prior to the issuance of any grading permit, the Contractor shall provide written evidence to the City of Lake Forest Director of Development Services that the Contractor has retained a qualified Archaeologist to observe grading activities and to salvage and catalogue archaeological resources, as necessary. The Archaeologist shall be present at the pre-grade conference; shall establish procedures for archaeological resource surveillance; and shall establish, in cooperation with the Contractor, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts, as appropriate. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the project Contractor, for exploration and/or salvage.

Prior to the release of the grading bond, the Contractor shall obtain approval of the Archaeologist's follow-up report from the City of Lake Forest Director of Public Works. The report shall include the period of inspection, an analysis of any artifacts found, and the present repository of the artifacts. The Contractor shall prepare excavated material to the point of identification. The Contractor shall offer excavated finds for curatorial purposes (for the portion of roadway between Commercentre Drive and Towne Centre Drive) to the City of Lake Forest Director of Public Works, or his/her designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the City of Lake Forest Director of Public Works. The Applicant shall pay curatorial fees if an applicable fee program has been adopted by the City Council, and such fee program is in effect at the time of presentation of the materials to the City of Lake Forest or its designee, all shall be in a manner meeting the approval of the City of Lake Forest Director of Public Works.

Paleontological Resources Monitoring

Prior to the issuance of any grading permit, the project Contractor shall provide written evidence to the City of Lake Forest Director of Public Works, that the Contractor has retained a qualified Paleontologist to observe grading activities and to salvage and catalogue fossils, as necessary. The Paleontologist shall be present at the pre-grade conference; shall establish procedures for paleontological resources surveillance; and shall establish, in cooperation with the Contractor,

procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils. If the paleontological resources are found to be significant, the Paleontologist shall determine appropriate actions, in cooperation with the Contractor, that ensure proper exploration and/or salvage.

Prior to the release of any grading bond, the Contractor shall submit the Paleontologist's follow-up report for approval by the City of Lake Forest Director of Public Works. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. The Contractor shall prepare excavated material to the point of identification. The Contractor shall offer excavated finds for curatorial purposes (for the portion of roadway between Commercentre Drive and Towne Centre Drive) to the City of Lake Forest, or its designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the City of Lake Forest Director of Public Works. The Applicant shall pay curatorial fees if an applicable fee program has been adopted by the City Council, and such fee program is in effect at the time of presentation of the materials to the City of Lake Forest or its designee, all in a manner meeting the approval of the City of Lake Forest Director of Public Works.

Paleontological monitoring is recommended during grading of the property when grading activities expose older Late Pleistocene Epoch Quaternary Period Alluvium, the Miocene Epoch Tertiary Period Monterey Formation and/or the Oso Sand member of the Late Miocene to Early Pliocene Epoch Tertiary Period Capistrano Formation.

Human Remains

In accordance with California Health and Safety Code, Section 7050.5, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains. The County Coroner shall make such determination within two working days of notification of discovery. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or believed to be Native American, the County Coroner shall notify the Native American Heritage Commission in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendents shall complete their inspection within *48 hours of being granted access to the site*. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

With implementation of the mitigation program listed above, potential impacts to paleontological and archaeological resources would be reduced to a level considered less than significant. Should the extension of the wildlife corridor be implemented, the potential impacts to paleontological and archaeological resources would be reduced to a level considered less than significant.

Outside Proposed Alton Parkway Extension Within Baker Ranch

Testing and Evaluation

Section 21083.2(a) of the CEQA Statutes and Section 15064.5(a) of the CEQA Guidelines require evaluation of cultural resources and a determination whether a project may have a significant on them. If it cannot be determined whether CA-ORA-1004 and CA-ORA-1150 were previously evaluated for significance, it is recommended that a testing program be conducted to evaluate the sites' eligibility for listing in the California Register of Historical Resources. The

testing program must be designed to verify that the sites retain integrity, whether a subsurface component exists at the sites, and their areal extent. It must also evaluate the site's diversity and density of artifacts and their potential for chronological controls.

Preservation/Data Recovery Excavation

Section 21083.2(b–d) of CEQA and Section 15064.5(b–c) of the CEQA Guidelines require mitigation measures for eligible sites that would suffer significant adverse changes (damage or destruction). Reasonable effort must be made to permit these resources to remain in place. To the extent that this is not feasible, data recovery excavation is required to mitigate the significant effects of the project on significant cultural resources. Should either of the sites (CA-ORA-1004 or CA-ORA-1150) be determined significant, a data recovery excavation would ensure that a representative sample of each site is recovered. A Data Recovery Plan should be developed to detail the methods of the excavation.

Cultural Resources Monitoring

Section 21083.2(i) of the CEQA Statutes and Section 15064.5(f) of the CEQA Guidelines provide for the accidental discovery of historical resources discovered during construction. Because of the three archaeological sites known to remain on the property, the general sensitivity of the project area for cultural resources and the possibility that unanticipated discoveries such as buried features (hearths, living floors, etc.) still exist in the subsurface (whether as part of the three known sites or a currently unknown site), it is recommended that monitoring of mass grading for this project be accomplished by a qualified Archaeologist who meets the Secretary of the Interior's Standards for Archaeologists (NPS 1983). In the event that cultural resources are exposed during construction, the Monitor must be empowered to temporarily halt construction in the immediate vicinity of the discovery while it is evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, additional work (such as preservation or data recovery excavation) may be warranted. A Registered Professional Archaeologist (RPA) should, at minimum, supervise any monitoring activities.

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DISPOSITION OF DATA

This report will be filed with Shea Properties, BonTerra Consulting, and at the SCCIC at California State University, Fullerton. All field notes and other documentation related to the study are on file at BonTerra Consulting.

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SECTION 1.0
UNDERTAKING INFORMATION/INTRODUCTION

1.1 CONTRACTING DATA

Shea Properties contracted BonTerra Consulting to conduct a cultural resources literature search and pedestrian survey and to complete a Survey Report that details the findings of the investigation.

1.2 PURPOSE

This section contains a discussion of the applicable laws, ordinances, regulations, and standards that govern cultural resources and that must be adhered to prior to and during construction of the proposed Alton Parkway Extension Project and the development of Baker Ranch. Federal and State regulations are included as it is possible that both CEQA and the National Historic Preservation Act (NHPA) regulations will apply. The report is intended to satisfy the requirements of (1) Section 106 of NHPA (36 CFR 800); (2) a review by the U.S. Army Corps of Engineers (USACE) and State Historic Preservation Officer (SHPO) relative to a required Clean Water Act (CWA) 404 Permit for the proposed project; and (3) State CEQA regulations (14 CCR §15064.5 & PRC §21083.2).

1.2.1 FEDERAL

Cultural resources are considered during federal undertakings chiefly under Section 106 of NHPA of 1966 (as amended) through one of its implementing regulations (36 CFR 800, Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other federal laws include the Archaeological Data Preservation Act of 1974, the American Indian Religious Freedom Act (AIRFA) of 1978, the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1989, among others.

Section 106 of NHPA (16 *United States Code* [U.S.C.] 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce the impacts to an acceptable level. Significant cultural resources are those resources that are listed or are eligible for listing in the NRHP per the criteria listed at 36 CFR 60.4 below:

> The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:
>
> (a) Are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) Are associated with the lives of persons significant in our past; or

(c) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) Have yielded, or may be likely to yield, information important in prehistory or history.

1.2.2 STATE

CEQA requires a lead agency to determine whether a project may have a significant effect on one or more historical resources. A "historical resource" is defined as a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Section 21084.1); a resource included in a local register of historical resources (Section 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5[a][3]).

Section 5024.1 of the *Public Resources Code*, Section 15064.5 of the CEQA Guidelines, and Sections 21083.2 and 21084.1 of the CEQA Statutes were used as the basic guidelines for the cultural resources study. PRC 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purposes of the register are to maintain listings of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources on the California Register were expressly developed to be in accordance with previously established criteria developed for listing on the NRHP, enumerated above.

According to Section 15064.5(a)(3)(A–D) of the CEQA Guidelines, a resource is considered historically significant if it meets the criteria for listing on the CRHR including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

Impacts to significant cultural resources that affect those characteristics of the resource that qualify it for the NRHP or adversely alter the significance of a resource listed on or eligible for listing on the CRHR are considered a significant effect on the environment. Impacts to cultural resources from the proposed project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource which contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of the current study is to evaluate whether any cultural resources remains exposed on the surface of the Alton Parkway Extension and Baker Ranch project area. If resources are

discovered, management recommendations are to evaluate the resources for NRHP or CRHP eligibility.

1.3 UNDERTAKING

The planned undertaking consists of the extension of Alton Parkway from Commercentre Drive to Town Centre Drive in the City of Lake Forest. The Baker Ranch property will subsequently be developed as a residential community.

1.4 EXHIBIT

Exhibit 1 shows a portion of the USGS 7.5-Minute Quadrangle, El Toro, California, which depicts the specific location of the project area, with an inset map showing the general vicinity of the study area.

1.5 PROJECT PERSONNEL

The cultural resources study was directed by Mr. Patrick Maxon, RPA, who meets the Secretary of Interior's Standards and Guidelines for Archaeology (NPS 1983) for prehistoric archaeology and is an Orange County-certified Archaeologist. Mr. Maxon undertook the cultural resources literature review and background research. Mr. Maxon and Mr. Justin Partridge of BonTerra performed the cultural resources survey.

SECTION 2.0
SETTING

2.1 NATURAL

The project area is located partially within and immediately southeast of Borrego Canyon Wash; a currently dry creek that washes out of the Santa Ana Mountains, through Borrego Canyon, to the northeast. The property consists of the wash (covered in agricultural uses) and several high ridges and knolls generally to the south and east of the wash in the southern and eastern portions of the property. Much of the property supports native vegetation except for the nursery operations in and near the wash and graded areas in the extreme southern and eastern portions of the property.

2.2 CULTURAL

A long-standing tenet of New World archaeology has been that man did not arrive in the western hemisphere until about 10,000 to 11,000 years Before Present (ybp).[1] Some researchers have argued for earlier dates of entry, but the evidence has not been accepted by a majority of archaeologists. Until recently, they claimed early sites lacked definitive dates. This situation is beginning to change as a result of both archaeological studies and studies in other disciplines. An example of an archaeological site with older dates is the Monte Verde site in Chile, confidently dated to 12,250 ybp. Coupled with the span of time required for dispersal from the Bering Strait area to southern Chile, it is obvious that arrival had to occur long before the generally accepted dates (Dixon 1993). A second site with confident dates in the 12,500 years ybp range is the Meadowcroft rockshelter in western Pennsylvania (Adovasio and Page 2002). In California, the Arlington Springs Site, on Santa Rosa Island, has human remains that have been recently dated to approximately 13,000 ybp (Johnson et al. 2002).

Most of the generally accepted early remains indicate a very small, mobile population apparently dependent on hunting of large game animals as the primary subsistence strategy. However, recent evidence suggests that some very early people may have had a more sedentary lifestyle and probably relied upon a variety of resources (see Adovasio and Page 2002 for a discussion of the Monte Verde, Chile site). While early populations certainly used other resources, the bulk of the few traces remaining today are related to game hunting. This situation results from the fact that hunting equipment involves many lithic tools, which do not decay, while the rest of the material culture used materials such as wood or leather, which are more subject to attrition through taphonomic factors. Lithic artifacts are the only surviving material from the Paleo-Indian Period. These consist primarily of large and extremely well made projectile points and large but cruder tools such as scrapers and choppers. Encampments were never permanent, but were probably sited near a major kill. Occupation would have lasted only until the resources of that kill were exhausted. Such an economy, using only a small fraction of the available resources would not have supported a large population. It is probable that the Paleo-Indians lived in groups no larger than extended families and that contact with other such groups was infrequent.

2.2.1 PREHISTORIC

Several chronologies are generally used to describe the sequence of the later prehistoric periods of Southern California. William Wallace (1955) developed the first comprehensive California chronologies and defines four periods for the southern coastal region. Wallace's

[1] "Before Present" assumes that 1950 is "present." Subtracting 1950 from 2008 is 58, which, when subtracted from 10,000 is 9,942 years before 2008 (i.e., 7,934 before common era [bce]). When subtracted from 11,000, it is 8,934 BCE.

synthesis is largely "descriptive and classificatory, emphasizing the content of archaeological cultures and the relationships among them" (Moratto 1984:159). Wallace relies upon the concept of cultural horizons, which are generally defined by the temporal and spatial distribution of a set of normative cultural traits, such as the distribution of a group of commonly associated artifact types. As a result, his model does not allow for much cultural variation within the same time period, nor does it provide precise chronological dates for each temporal division. Nonetheless, although now nearly 50 years old, the general schema of the Wallace chronology has provided a general framework for Southern California prehistory that remains valid today.

By the late 1960s, radiocarbon dates and assemblage data were more widely available for many Southern California archaeological sites. Based on these new data, Warren (1968) synthesizes Southern California prehistory into five traditions which, unlike Wallace's horizons, account for more regional variation within the same time period. Defined as "a generic unit comprising historically related phases," traditions were not strictly sequential temporal units (Warren 1968). That is, different traditions could co-exist within the same region or in neighboring regions at the same time. Table 1 summarizes Koerper and Drover's (1983) temporal chronology, which is based upon a refinement of the Wallace chronology and includes additional information regarding the major diagnostic traits, characteristics, and adaptations of each period drawn from the work of Wallace (1955), Warren (1968), and Chartkoff and Chartkoff's 1984 synthesis.

Horizon I. Early Man or Paleo-Indian Period (11,000 B.C. to 7,500 B.C.). While initially termed Early Man Horizon (I) by Wallace (1955), this early stage of human occupation is commonly referred to as the Paleo-Indian period today (Chartkoff and Chartkoff 1984:24). As discussed above, the precise start of this period is still a topic of considerable debate. At inland archaeological sites, the surviving material culture of this period is primarily lithic, consisting of large, extremely well made stone projectile points and tools such as scrapers and choppers. Encampments were probably temporary, located near major kills or important resource areas. The San Dieguito Tradition, defined by Warren at the stratified C.W. Harris site in San Diego County, is encompassed by this period of time (Moratto 1984:97).

Horizon II. Milling Stone Assemblages (7,500 B.C. to 1,000 B.C.). Encompassing a broad expanse of time, the Milling Stone period was named for the abundant millingstone tools associated with sites of this period. These tools, the mano and metate, were used to process small, hard seeds from plants associated with shrub-scrub vegetation communities. An annual round of seasonal migrations was likely practiced, with movements coinciding with ripening vegetal resources and the periods of maximal availability of various animal resources. Along the coast, shell midden sites are common site types. Some formal burials, occasionally with associated grave goods, are also evident. This period of time is roughly equivalent to Warren's (1968) Encinitas Tradition. Warren (1968) suggests that as millingstones are common and projectile points are comparatively rare during this period of time, hunting was less important than the gathering of vegetable resources.

However, more recent studies (Koerper 1981; Koerper and Drover 1983) suggest that a diversity of subsistence activities, including hunting of various game animals, were practiced during this period of time. At present, little is known about cultural change during this period of time within Southern California. While this lack of noticeable change gives the appearance of cultural stasis, almost certainly many regional and temporal cultural shifts did occur over the course of this period of time. Future research focused on temporal change within the Milling Stone period would greatly benefit our current understanding of Southern California prehistory. One avenue of research that could help accomplish this goal would be a synthesis of the growing amount of archaeological "gray" literature involving cultural resource mitigation of Milling Stone period sites within the Orange County area.

TABLE 1
PREHISTORIC CULTURAL CHRONOLOGY[a]

Period [b]	Temporal Span	Major Diagnostic Traits	Characteristics and adaptations
Early Man (San Dieguito)	11,000(?) to ±7,500 B.C. (?)	• Lack of grinding implements. • Large, well-made projectile points.	• Subsistence through hunting of large Pleistocene game animals. • Temporary camps at large kills. • Group no larger than extended family. • Widespread; covered most of North American continent, but no sites known locally. • Very small total population.
Milling Stone (Encinitas)	±7,500 B.C. (?) to ±1,000 B.C. 250	• Predominance of manos and metates. • Ornaments made of stone. • Large and often crude projectile points. • Cogstones and discoidals. • Charmstones. • Some mortars and pestles near end of period.	• Heavy reliance on hunting in early part of period. Deer, rabbit, and other small game associated with chaparral. • In middle to late part of period, reliance was on hard seeds associated with chaparral. • Coastal groups utilized shellfish and near shore resources. • Seasonal round based on ripening vegetable resources rather than animal migrations. This caused increased isolation leading to noticeable differences in culture in much smaller geographic areas. • Probably about 50 persons in average group. • Very little noticeable change in last two thirds of period. • Permanent settlement of Channel Islands by end of period.
Intermediate (Campbell/Encinitas)	1,000 B.C. ± 250 to A.D. 750 ± 250	• Bone ornaments. • Widespread use of mortars and pestles along with manos and metates. • Use of steatite begins. • Many discoidals. • Large projectile points trending to smaller in the last part of the period.	• Heavy reliance on acorns as food resource. Hard seeds, small animals, and coastal resources continue to be used. • Many more deep water [open] ocean resources utilized. • First permanently occupied villages. • Large increases in local population. • Atlatl (spear thrower) in use. Bow and arrow probably introduced near end of period. • Some evidence of trade.
Late Prehistoric (Shoshonean)	A.D. 750 ± 250 to A.D. 1769	• Shell ornaments. • Mortar, pestle, mano, and metate use continues. • Small, finely worked projectile points. • Widespread use of steatite. • Some pottery vessels appear near the end of the period.	• Increased exploitation of all resources (especially marine resources in coastal areas). • Large populations, some villages had as many as 1,500 persons. • Great increase in art objects. • Much evidence of trade.

a Based on Chartkoff and Chartkoff (1984), Koerper and Drover (1983), Wallace (1955), and Warren (1968).
b Temporal periods based on Koerper and Drover (1983), after Wallace (1955). Warren's (1968) roughly equivalent designation follows in parentheses.
c See, e.g., Glassow, et al. (1988) for evidence of permanent settlement of the Channel Islands circa 4,000–5,000 B.C. during the Milling Stone Period.

Horizon III. Intermediate Cultures (1,000 B.C. to A.D. 750). The Intermediate period is identified by a mixed strategy of plant exploitation, terrestrial hunting, and maritime subsistence strategies. Chipped stone tools, such as projectile points, generally decrease in size, but increase in number. Abundant bone and shell remains have been recovered from sites dating to these time periods. In coastal areas, the introduction of the circular shell fishhook and the growing abundance of fish remains in sites over the course of the period suggest a substantial increase in fishing activity during the Intermediate Horizon. It is also during this time period that mortar and pestle use intensified dramatically. The mano and metate continued to be in use on a reduced scale, but the greatly intensified use of the mortar and pestle signaled a shift away from a subsistence strategy based on seed resources to that of the acorn. It is probably during this time period that the acorn became the food staple of the majority of the indigenous tribes in Southern California. This subsistence strategy continued until European contact. Material culture generally became more diverse and elaborate during this time period and includes steatite containers, perforated stones, bone tools, ornamental items, and asphalt adhesive.

While Warren recognizes the start of the Campbell Tradition within the Santa Barbara region at roughly the beginning of Intermediate period, he did not see clear evidence of cultural change further south. As a result, the Encinitas Tradition in Southern California encompasses the both the Milling Stone and Intermediate periods in Warren's chronology (1968:2, 4). However, the more recent chronological schema by Koerper and Drover clearly recognizes an Intermediate Period within Southern California. They suggest that Warren's inability to recognize an intermediate cultural stage was likely due to "the lack of conclusive data in 1968" (1983:26).

Horizon IV. Late Prehistoric Cultures (A.D. 750 to A.D. 1769). During the Late Prehistoric period, exploitation of many food resources, particularly marine resources among coastal groups, continued to intensify. The material culture in the Late Prehistoric Horizon increased in complexity in terms of the abundance and diversity of artifacts being produced. The recovery and identification of a number of small projectile points during this period of time likely suggests a greater utilization of the bow and arrow, which was likely introduced near the end of the Intermediate Period. Shell beads, ornaments and other elements of material culture continue to be ornate, varied and widely distributed, the latter evidence suggestive of elaborate trade networks. Warren's (1968) scheme divides the late prehistoric period into several regional traditions. Western Riverside County, Orange County, and the Los Angeles Basin area are considered part of the "Shoshonean" tradition, which may be related to a possible incursion of Takic speakers into these areas during this period. The Late Prehistoric includes the first few centuries of early European contact (A.D. 1542 to 1769); also known as the Protohistoric Period as there was a low level of interaction between native Californians and Europeans prior to Portolá's overland expedition in 1769.

In the few centuries prior to European contact, the archaeological record reveals substantial increases in the indigenous population (Wallace 1955:223). Some village sites may have contained as many as 1,500 individuals. Apparently, many of these village sites were occupied throughout the year rather than seasonally. This shift in settlement strategy was likely influenced by improved food procurement and storage technology, which enabled population growth and may have helped stimulate changes in sociopolitical organization.

2.2.2 ETHNOGRAPHY

The project area is near the interface of lands occupied during the Late Prehistoric Period by the Native American societies commonly known to anthropologists as the Juaneño and the Gabrielino (Kroeber 1925; Bean and Shipek 1978; Bean and Smith 1978). The name "Juaneño" denotes those people who in historic times were administered by the Spanish from Mission San Juan Capistrano. Many contemporary Juaneño identify themselves as descendents of the

indigenous people living in the local San Juan and San Mateo Creek drainage areas, termed the Acjachemen Nation (Belardes 1992). While the term "Gabrielino" identifies those Native Americans who were under the control of the Spanish Mission San Gabriel, the overwhelming number of people here were of the same ethnic nationality and language group who generally referred to themselves as *Tongva*. Their territory extended from northern Orange County north to the San Fernando Valley in Los Angeles County. The terms the Native Americans in Southern California used to identify themselves have, for the most part, been lost; therefore, the names do not necessarily identify specific ethnic or tribal groups.

The two groups are broadly similar, but there are sufficient differences in Gabrielino and Juaneño language, ritual observances, and material culture to justify identification as separate social groups (Bean and Smith 1978). The languages of both groups are derived from the Takic family, part of the Uto-Aztecan linguistic stock. This feature was shared with the Serrano and Cahuilla Native American groups located in what is now San Bernardino and Riverside Counties. By contrast, the languages of the Native American groups located south of the Juaneño are derived from the Yuman language family, while the Chumash north of the Tongva appear to be of an isolated and deep origin, both representing origins quite different from that of the local languages (Mithun 1999:304).

The Yuman family of languages is derived from the American southwest while the Takic family can be traced to the Great Basin area (Driver 1969). Linguistic analysis of the Takic dialects has suggested that its speakers settled between the Chumash and Kumeyaay some time after 500 B.C. The implication is that the entire Southern California coastal region was once filled with these Chumashan and Yuman speakers who were gradually separated and displaced by Takic speaking migrants from the Great Basin area (Kroeber 1925:578–579). Unpublished linguistic work by Munroe (1994) and an analysis of migration legends by O'Neil (n.d.a) has suggested further details of coastal Takic migration patterns, indicating the larger Luiseño-Juaneño ethnic nation reached the coast before the Gabrielino and originally spread into areas that the later-arriving Gabrielino subsequently occupied. The timing, extent, and impact on local societies with regard to the migration is not well understood and any data related to it represents an important contribution to the understanding of local prehistory.

Juaneño/Acjachemen

The Acjachemen population during the Precontact Period is thought to have numbered upwards of 3,500 (O'Neil 2002). It is known that 1,138 local Native Americans, consisting primarily of Acjachemen but including Gabrielino, coastal and interior Luiseño, Serrano, and Cahuilla, resided at Mission San Juan Capistrano in the year 1810 (Englehardt 1922:175). The Mission's death register shows as many as 1,665 native burials in its cemetery by this time, a number in addition to those who died unrecorded at the remaining villages from natural causes and introduced infectious diseases.

The Acjachemen were of the Cupan (or southern) Takic language branch, which included the rest of the Luiseño and the Cahuilla social group. They resided in permanent, well-defined villages and associated seasonal camps. Each village consisted of 35 to 300 persons of a single lineage in the smaller villages, and of a dominant clan with other families in the larger settlements. As Boscana said of the Acjachemen, "all the rancherias were composed of a single relationship" (Harrington 1934:32). Each clan/village had its own resource territory and was politically independent, yet maintained ties to others in the immediate region through economic, religious, and social networks. There were three hierarchical social classes: the elite class consisting of chiefly families, lineage heads, and other ceremonial specialists; a "middle class" of established and successful families; and finally, people of disconnected or wandering families and captives of war (Bean 1976:109-111). Native leadership consisted of the *Nota*, or clan chief,

who conducted community rites and regulated ceremonial life in conjunction with the council of elders, or *puuplem*.

A village (or tribelet) usually had one clan or lineage that dominated, with lineages or single families of other clans residing there as well. These ranged in size from a low of 35–50 individuals to a high of 250–300, depending on its resource base and political status. In an ecologically rich area such as the local coastal foothills, the population was dense and villages existed every three to five miles; meanwhile among the Cahuilla, in the semi-desert regions of the Coachella Valley, a group would control a single canyon and its alluvial fan for about ten miles.

Plant foods were by far the largest part of the traditional diet. The following description is taken from the excellent and complete summary by Bean and Shipek (1978:552). Acorns were the most important single food source and two species of oaks were used. Villages were located near water sources necessary for the leaching of acorns, which was a daily necessity. As a staple, the acorn mush, or *weewish*, could be fixed in various ways as gruel, cakes, or fried. It could be sweetened with honey or sugar-laden berries, and it could be made into a stew with greens and meat. Grass seeds were the next most abundant plant food used. Other important seeds were manzanita, sunflower, sage (*Salvia* spp.), chia (*Salvia columbariae*), lemonade berry, wild rose, holly-leaf cherry or islay (*Prunus ilicifolia*), prickly pear (*Opuntia littoralis*), lamb's-quarter (*Chenopodium album*), and possibly pine nuts. Seeds were parched, ground, and cooked as mush in various combinations according to taste and availability, much in the manner as *weewish*. Greens such as thistle (*Cardus* spp.), lamb's-quarters, miner's lettuce (*Claytonia perfoliata*), white sage (*Salvia apiana*), and clover (*Trifolium* spp.) were eaten raw or cooked, or sometimes dried for storage. Cactus pods and fruits were used. Thimbleberries (*Rubus parviflorus*), elderberries (*Sambucus caerulea*), and wild grapes (*Vitis girdiana*) were eaten raw or dried for later cooking. Cooked yucca buds, blossoms, pods, and stalks provided a sizable addition to the community's food resources. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus provided significant food supplement and were prized as delicacies. Various teas were made from flowers, fruits, stems, and roots for medicinal cures as well as beverages. Marine plants, both sea grasses and kelp, also played their role as food, medicine, and bedding. Salt grass was harvested in lagoon ponds for salt; this plant may have provided the name for the nearby village of *Eñe*.

The importance of botanical resources to the well being of the society, both economic and spiritual, can be seen in the extensive use of plant terms for place names (O'Neil 2000). Of the 15 rancherias in the traditional Acjachemen list recorded by Fr. Boscana (Harrington 1934:59-61), ten of them are named for plants. They were also frequently used to name geographic features (i.e., to specify springs and such). Plant names were adopted for personal names, especially among women—Little Rose, White Sage, and Violet among them—while men were sometimes named for Elderberry (O'Neil n.d.b).

The principal game animals were deer, rabbit, jackrabbit, wood rat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Most predators were avoided as food as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, while salmon were available as they ran in the larger creeks. Being predominantly a coastal people, the Acjachemen made extensive use of marine foods in their diet; marine mammals, fish, crabs and lobsters, among others were hunted and gathered from both the shoreline and the open ocean using reed and, possibly, dugout canoes. Shellfish, however, were the most heavily used resource. The animals gathered included abalone, turbans, mussels, and others from the rocky shores, clams, scallops, and other bivalves from the sandy beaches, while *Chione* (clams), oysters, bubble shells, and more were gathered from the estuaries. Along with subsistence use, several shellfish (Olivella, pecten, and abalone) were collected for economic and ornamental

use to be formed into beads and bangles. Some shells were collected to be shaped into tools such as cups, spoons and scrapers.

Women collected most of the plant resources, while men fished and hunted the large game and most of the small game. Yet there was not a rigid sexual division of labor. Collecting the staple acorn was a family affair as everyone from the village relocated to the hills for several weeks to gather the resource. Men helped with the heavy labor of knocking the trees and transporting the loads, and men, women and children gathered them up off the ground. Men often collected food and medicinal plants while on hunting expeditions. Women, in turn, sometimes trapped small game and collected shellfish. There was also a labor division in manufacturing goods: "Women wove baskets as well as clothing; men made goods from wood, bone, horn, and stone. Finally women were responsible for household duties, such as fetching water and wood, and the bulk of child rearing" (Jackson and Castillo 1996:38). Men tended to have exclusive responsibility for ritual and sacred affairs, while women prepared the extensive reserves of food required for the days-long ritual affairs and performed supplemental dancing and singing.

Sedentary and autonomous village groups, each with specific hunting, collecting, and fishing areas, were situated at the interface of several diverse ecological zones when possible. Each locale that contained economic resources (e.g., quarries, oak groves, hunting and camping sites) was owned by a clan, lineage, or individual depending on inheritance, or even collectively by the village group. Only with the express permission of the other group or family could gathering be conducted within territory other than one's own (White 1963). Many inland groups also had fishing and gathering sites on the coast they visited annually and/or when inland foods were scarce. For each year's acorn harvest, most of the village population would settle for several weeks at a time in the mountain groves to harvest the acorns, hunt game animals, and collect whatever else was locally available. However, most of the foods were available within a day's round-trip of the village.

In summary, the Acjachemen made use of a very high percentage of the available subsistence resources. Their habitat included every ecological zone from the open ocean, sandy beaches, shallow inlets and marshes, to the coastal chaparral, lush interior grass valleys, extensive oak groves, up to the pines and cedars at higher elevations. Typically, the clan would spend most of the year together in a village near the coast, on a coastal bluff, or along a river in the foothills. In the spring, gathering parties or even nuclear family groups would depart for a time to take advantage of ocean or vegetable resources that were ripening at some distance from the town. In general, the trend would be toward higher elevations as the season progressed, with the early fall being spent collecting and processing acorns in the mountain oak groves. The acorn harvest was a major trip, with most members of the clan relocating to their inherited groves for a month or more. This yearly trip amounted to a transhumance habitation cycle. With the majority of the population there for an extended time, the seasonal camp can be recognized by the combination of an oak grove, multiple bedrock mortars, and a supply of water. Men, women, and children were present, with a wide variety of activities being performed to maintain the people during this time (Harrington 1986: Rl. 121-Fr. 494, left). Meanwhile, the village back down the mountain could take on an air of abandonment (Palou 1966:258). The people would return to the rancheria villages for the winter when the acorn gathering was concluded.

Gabrielino/Tongva

To the north of the Acjachemen resided the Gabrielino/Tongva. They arrived in the Los Angeles Basin probably before 500 B.C. as part of the so-called Shoshonean (Takic speaking) Wedge from the Great Basin region and gradually displaced the indigenous peoples, probably Hokan speakers. Large, permanent villages were established in the fertile lowlands along rivers and streams and in sheltered areas along the coast. Eventually, Gabrielino territory encompassed

the greater Los Angeles Basin, coastal regions from Topanga Canyon in the north to perhaps as far south as Aliso Creek, as well as the islands of San Clemente, San Nicholas, and Santa Catalina (Bean and Smith 1978:538–540). Recent studies suggest the population may have numbered as many as 10,000 individuals at their peak in the Precontact Period.

The subsistence economy of the Gabrielino was one of hunting and gathering. The surrounding environment was rich and varied and the natives were able to exploit mountains, foothills, valleys, deserts, and coasts. As was the case for most native Californians, acorns were the staple food (by the Intermediate Horizon), supplemented by the roots, leaves, seeds, and fruit of a wide variety of flora (i.e., cactus, yucca, sage, and agave). Fresh and saltwater fish, shellfish, birds, insects, as well as large and small mammals, were exploited.

A wide variety of tools and implements were employed by the Gabrielino to gather, collect, and process food resources. The most important hunting tool was the bow and arrow. Traps, nets, blinds, throwing sticks, and slings were also employed. Fish were an important resource and nets, traps, spears, harpoons, hooks, and poisons were utilized to catch them. Ocean-going plank canoes and tule balsa canoes were used for fishing as well as for travel (Moratto 1990:63) by those groups residing near the ocean.

The processing of food resources was accomplished in a variety of ways: nuts were cracked with hammer stone and anvil; acorns were ground with mortar and pestle, seeds and berries with mano and metate. Yucca, an important resource in many areas, was eaten by the natives, as well as exploited for its fibers.

Strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks were also employed. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Kroeber 1925:629).

Gabrielino houses were circular domed structures of willow poles thatched with tule. They were actually quite large and could, in some cases, hold fifty individuals. Other structures served as sweathouses, menstrual huts, and ceremonial enclosures (Bean and Smith 1978).

Kroeber (1925:621) considered the Gabrielino:

> …to have been the most advanced group south of Tehachapi, except perhaps the Chumash. They certainly were the wealthiest and most thoughtful of all the Shoshoneans of the State, and dominated these civilizationally wherever contacts occurred.

2.2.3 AREA HISTORY

Juan Rodriguez Cabrillo sailed along the California coast in 1542 and, according to available records, stopping only at San Diego and the Channel Islands, was the first European to come into contact with the Gabrielino. The first Europeans to visit Orange County arrived in 1769 when Gaspar de Portolá led an overland expedition from San Diego to Monterey. This expedition of 63 persons passed near the study area, using Arroyo Trabuco as a route to the north (Cramer 1988).

Mission San Gabriel, in Los Angeles County, was founded in September 1771 and all the Native Americans from the Los Angeles plain were persuaded to settle in its vicinity. The first permanent settlement in Orange County came when San Juan Capistrano was selected as the site for a Mission in the spring of 1775. By the early 1820s, all Native Americans from the

coastal plains and foothills of what is now Orange County had been settled on Mission lands or on the growing rancho system.

The Mexican-American War ended on February 2, 1848, with the signing of the Treaty of Guadalupe Hidalgo. The treaty established California as a United States possession and provided for the retention of private lands held by the conquered Mexicans. However, in 1851, the United States required that the courts approve all Hispanic land grants. As a result, many of the land grants were not approved and the division of many of the larger ranchos occurred.

The effects of mission influence upon the local native populations were devastating. The reorganization of their culture alienated them from their traditional subsistence patterns and social customs. European diseases, against which the natives had no immunities, reached epidemic proportions and Gabrielino populations were decimated (Johnston 1962:135). Although most Gabrielino submitted to the Spanish and were incorporated into the mission system, some refused to give up their traditional existence and escaped into the interior regions of the state.

2.2.4 LOCAL HISTORY

The Baker Ranch project area is situated adjacent the intersection of three Mexican land grants: Rancho Lomas de Santiago to the northwest, Rancho San Joaquin to the southwest, and Rancho Cañada de los Alisos to the east, on which the Baker Ranch property lies (California Spatial Information Library: Public Land Survey System 2008). Site CA-ORA-758, the majority of which lies on the Baker Ranch property, extends southwest onto Rancho San Joaquin.

Rancho Cañada de los Alisos was originally a 10,688-acre parcel granted to Jose Serrano in 1842. Serrano foreclosed on the property, after a severe drought killed much of his cattle stock in 1864, and it came into the possession of J.S. Slauson and Associates. Slauson divided the ranch into 10 parcels, one of which was sold to Dwight Whiting in 1864.

V.P. Baker originally purchased a 5,000-acre parcel of a larger 7,800-acre property in 1958, along with a group of investors, from Dwight Whiting's heirs. This 5,000-acre property became the Baker Ranch. A portion of the remaining 2,800 acres is still currently known as Whiting Ranch. Baker sold off portions of the ranch over the years, and development all around it left the current approximately 380 acres that remain today (Lake Forest Historical Society personal communication 2008).

SECTION 3.0
METHODS

3.1 CULTURAL RESOURCES RECORDS SEARCH

Mr. Patrick Maxon conducted the literature review of records on file at the South Central Coastal Information Center at California State University, Fullerton on July 24, 2008 (see Appendix B). The review consisted of an examination of the USGS 7.5′ Quadrangle, El Toro, and its Mylar overlays, and the 1942 USGS 15′ Quadrangle, Santiago Peak, to evaluate the project area for any sites recorded or cultural resources studies conducted within the parcel and within its one-mile radius. In addition, California Points of Historical Interest (PHI), the California Historical Landmarks (CHL), the California Register of Historic Places (CRHR), the National Register of Historic Places (NRHP) and the California State Historic Resources Inventory (HRI) were reviewed, as was the 1896 and 1901 USGS Santa Ana, and the 1942 and 1943 USGS Santiago Peak, 15′ Series topographic maps.

3.2 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

An in-house records and literature search conducted by Archaeological Resource Management Corporation (ARMC) (Velechovsky 2003) for the Alton Parkway Extension Project was reviewed as part of the current background research.

Sam McLeod of the Los Angeles County Natural History Museum conducted a review of the museum's geologic and vertebrate paleontological records for the project area and vicinity on August 6, 2008 (Appendix C).

3.3 NATIVE AMERICAN SCOPING

The Native American Heritage Commission was contacted to provide a Sacred Lands File Search and Native American Contacts list. A response was received from Program Analyst Dave Singleton on July 24, 2008 (Appendix D).

3.4 LOCAL CONTACTS

Patrick Maxon of BonTerra Consulting met with Marianne Norris of the Lake Forest Historical Society on August 6, 2008. Ms. Norris discussed Baker Ranch, permitted the Mr. Maxon to access historical society files, and provided a 1996 interview of the grandson of V.P. Baker, Mr. Christopher Vietch, recorded on audio cassette.

3.5 FIELD SURVEY

BonTerra Consulting Archaeologist Patrick Maxon and BonTerra Consulting Technician Justin Partridge conducted the cultural resources survey of the property on July 30, 2008. The survey was designed to revisit the known sites and record any previously unknown sites located within the proposed project area. Transects were walked in portions of the project area.

SECTION 4.0 FINDINGS

4.1 CULTURAL RESOURCES RECORDS SEARCH

In summary, four cultural resources have been recorded within the Baker Ranch limits, one of which (CA-LAN-758) is within the proposed Alton Parkway Extension right-of-way. Seven cultural resources studies have at least partially impinged on the current project area. Fifty-three cultural resources and 34 isolated artifacts are recorded within approximately 1 mile of the project area. Additionally, there have been 49 cultural resources investigations within 1 mile. Table 2 lists and briefly describes the cultural resources within the project area.

TABLE 2
CULTURAL RESOURCES WITHIN THE PROJECT AREA

Trinomial	Recorder/Year	Comment/Current Status
CA-ORA-40	Unknown/1949	Mortars/not evaluated, destroyed
CA-ORA-758*	Mabry/1978	Lithic Scatter/Phase III completed, portions may remain under orchard
CA-ORA-1004	Del Chario & Grove/1981	Lithic Scatter/not evaluated, portions remain
CA-ORA-1150	Brown & Bissell/1988	Lithic Scatter, fire affected rock/not evaluated, portions remain
*Site partially within proposed Alton Parkway Extension right-of-way.		

Only one previous survey covered all of the current project area (Bissell 1988). Bissell, whose study, *Cultural Resources Reconnaissance of the Baker Ranch Property*, consists of the then 692-acre property and estimated that approximately 30 percent of the ground surface was visible during the survey. Bissell visited the three sites previously recorded on the current property (CA-ORA-40, CA-ORA-758, and CA-ORA-1004) and recorded one additional site (CA-ORA-1150). He recommended evaluation of all four sites.

Archaeological Resource Management Corporation (ARMC) completed test and data recovery excavations at CA-ORA-758 (Demcak 1994a; 1994b) and conducted an assessment of the proposed Alton Parkway Extension (Demcak 2003), the northern part of which is within the current project area. The final disposition of CA-ORA-40, CA-ORA-1004, and CA-ORA-1150 was not resolved through the literature review.

4.2 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

An in-house records and literature search conducted by ARMC (Velechovsky 2003) for the Alton Parkway Extension Project revealed no paleontological localities. However, according to the study, grading for the proposed route would expose older Late Pleistocene Epoch Quaternary Period Alluvium, the Miocene Epoch Tertiary Period Monterey Formation and the Oso Sand member of the Late Miocene to Early Pliocene Epoch Tertiary Period Capistrano Formation. Full-time monitoring was recommended for excavations in the Monterey and Capistrano Formations. Quarter-time monitoring was recommended for excavations in the alluvium.

The Los Angeles County Natural History Museum paleontological records search for the project area failed to reveal the presence of any vertebrate fossil localities in the project area. None are recorded nearby from the same or similar sedimentary units. The review found that surficial sediments in Borrego Canyon Wash consist of younger Quaternary Alluvium, not likely to contain significant fossils, but this alluvium may be underlain by older deposits. The review did confirm Velechovsky's (2003) findings that the project may disturb Late Pleistocene Epoch Quaternary Period Alluvium, the Miocene Epoch Tertiary Period Monterey Formation, and the

Oso Sand member of the Late Miocene to Early Pliocene Epoch Tertiary Period Capistrano Formation. Close monitoring of grading in these sediments was recommended.

4.3 NATIVE AMERICAN SCOPING

The NAHC's Sacred Lands File search failed to indicate the presence of Native American cultural resources in the immediate project area. The Native American Contacts List included in the search listed the following individuals:

- Sam Dunlap, Tribal Secretary, Gabrielino/Tongva Council/Gabrielino Tongva Nation.
- Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians.
- Cindi Alvitre, Ti'At Society.
- Robert Dorame, Tribal Chair/Cultural Resources, Gabrielino Tongva Indians of California Tribal Council.
- David Belardes, Chairperson, Juaneño Band of Mission Indians Acjachemen Nation.
- Anthony Rivera, Chairman, Juaneño Band of Mission Indians Acjachemen Nation.
- Joyce Perry, Tribal Manager & Cultural Resources, Juaneño Band of Mission Indians Acjachemen Nation.
- Alfred Cruz, Cultural Resources Coordinator, Juaneño Band of Mission Indians.
- Adolph "Bud" Sepulveda, Chairperson, Juaneño Band of Mission Indians.
- Sonia Johnston, Tribal Vice Chairperson, Juaneño Band of Mission Indians.
- Anita Espinoza, Juaneño Band of Mission Indians.
- Joe Ocampo, Chairperson, Juaneño Band of Mission Indians.

Each individual on the list was sent an informational letter with a description of the project and the known cultural resources on the property. Each was asked to contact BonTerra Consulting should they have additional knowledge or concerns relative to cultural resources on the property. No responses have been received at the time of this writing.

4.4 LOCAL CONTACTS

The research undertaken at the Lake Forest Historical Society produced several documents on file and provided important information on V.P. Baker and the Ranch. The interview of Mr. Christopher Vietch, V.P. Baker's grandson, helped confirm and complete the history.

4.5 FIELD SURVEY

Prior to this study, four archaeological sites (CA-ORA-40, CA-ORA-758, CA-ORA-1004, and CA-ORA-1150) were known and recorded on the property. The areas of the sites were visited to evaluate the current conditions of the sites. Of the four known sites, two (CA-ORA-758 and CA-ORA-1150) were relocated, one (CA-ORA-1004) likely still exists under dense vegetation, and the last (CA-ORA-40) is likely destroyed.

The following is a summary of each site recorded on the property based on the work of Bissell (1988) and Demcek (1994a, 1994b, 2003), a review of current aerial photographs of the site, and the pedestrian survey of the property.

4.5.1 SITE WITHIN PROPOSED ALTON PARKWAY EXTENSION

CA-ORA-758

This site, originally recorded as a wide scatter of lithic material with one dense concentration of tools, was tested, deemed significant (Demcak 1994a), and subsequently underwent Phase III data recovery excavations (Demcak 1994b). In Demcak's (2003:9) summary report, full-time Phase IV monitoring was recommended during grading. It appears from current aerial photographs that the site location is still intact on a long ridge that overlooks Borrego Canyon Wash. An avocado orchard that existed at the time of the excavations remains at the location, but has been abandoned. The author's pedestrian survey confirmed that artifacts still exist on the surface of the site. A well-formed unifacial mano and several lithic flakes were noted during the survey. The mano and three flakes' locations were recorded and the artifacts were collected to protect them from potential destruction during grading. They will be included in the extant artifact assemblage at the conclusion of monitoring operations.

The ridge on which the site lies extends in a southwest direction, off the Baker Ranch property and onto the U.S. Marine Corps Air Station (MCAS) El Toro. The site appears to also extend along a ridge onto MCAS El Toro to the southwest. Portions of the site on the current property may remain relatively intact under the orchard. The current condition of the portion of the site on MCAS El Toro property is unknown.

4.5.2 SITES OUTSIDE PROPOSED ALTON PARKWAY EXTENSION WITHIN BAKER RANCH

CA-ORA-40

This site is one of the earliest recorded in Orange County. The site record is sparse, but suggests that mortars were plowed up at the site. Much of the site area contained an avocado orchard during Bissell's 1988 visit, but it currently appears that it has been completely destroyed. A project aerial photograph shows that the area of the site has been graded. The reconnaissance survey verified this. It is unclear whether test (recommended by Bissell 1988) or data recovery level investigations were undertaken at the site.

CA-ORA-1004

This site, recorded as an extensive lithic scatter with groundstone tools hammerstones, flakes and cores, was located in an avocado grove which, in addition to road construction, caused "considerable disturbance" (Bissell 1988). A project aerial photograph shows that the area of the site has not been extensively graded. Only dirt roads extend onto the site area, while native vegetation remains present. Little additional disturbance is evident. This was verified by the reconnaissance survey. Although no artifacts were seen during the current survey, dense vegetation likely obscures the cultural material. It is not known whether test (recommended by Bissell 1988) or data recovery level investigations were undertaken at the site.

CA-ORA-1150

This site consisted of flakes, cores, and fire-affected rock. It is located north/northeast of CA-ORA-758, on a rise above Borrego Canyon Wash that the aerial photograph and USGS Quad show as the location of a road terminating at a structure. The reconnaissance survey revealed that the site and landform appears to be relatively intact. During the survey, several lithic flakes were observed adjacent the dirt road that extends along the ridge through the site

area. No structure remains on the site. It is not known whether test (recommended by Bissell 1988) or data recovery level investigations were undertaken at the site.

MANAGEMENT CONSIDERATIONS

At least portions of three of the sites (CA-ORA-758, CA-ORA-1004, and CA-ORA-1150) remain on the property, but site CA-ORA-40 appears to be completely destroyed The impacts to CA-ORA-758 have been mitigated through data recovery excavation (Demcak 1994b). Neither site CA-ORA-40 or CA-ORA-758 will be considered further, aside from during monitoring of grading. Sites CA-ORA-1004 and CA-ORA-1150 appear to remain in their recorded locations. The landforms on which these two sites lie are still largely intact. Both are located on knolls that still support sage scrub vegetation and, although they have been disturbed, they do not appear to have been destroyed. It is not known whether they have been subject to testing and evaluation. No such record was found as a result of research at the SCCIC or Lake Forest Historical Society. If testing has not occurred, they must be evaluated for significance.

Previously unknown cultural resources, especially prehistoric, and paleontological resources may also be exposed by construction that penetrates native soils.

The mitigation measures provided in Section 5.0 would reduce the impacts of the proposed project to a less than significant level.

SECTION 5.0
RECOMMENDATIONS

As a point of clarification, these mitigation measures are identical, with minor variations, to those that appear in the Alton Parkway Extension Project Draft EIR Mitigation Monitoring and Reporting Program (BonTerra Consulting 2007). Any modifications to these measures will be *italicized*.

5.1 WITHIN PROPOSED ALTON PARKWAY EXTENSION

5.1.1 CULTURAL RESOURCES MONITORING

Section 21083.2(i) of the CEQA Statutes and Section 15064.5(f) of the CEQA Guidelines provide for the accidental discovery of historical resources discovered during construction. Because of the three archaeological sites known to remain on the property, the general sensitivity of the project area for cultural resources and the possibility that unanticipated discoveries such as buried features (hearths, living floors, etc.) still exist in the subsurface (whether as part of the three known sites or a currently unknown site), it is recommended that monitoring of mass grading for this project be accomplished by a qualified Archaeologist who meets the Secretary of the Interior's Standards for Archaeologists (NPS 1983). In the event that cultural resources are exposed during construction, the Monitor must be empowered to temporarily halt construction in the immediate vicinity of the discovery while it is evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, additional work (such as preservation or data recovery excavation) may be warranted. A Registered Professional Archaeologist (RPA) should, at minimum, supervise any monitoring activities.

Prior to the issuance of any grading permit, the Contractor shall provide written evidence to the City of Lake Forest Director of Development Services that the Contractor has retained a qualified Archaeologist to observe grading activities and to salvage and catalogue archaeological resources, as necessary. The Archaeologist shall be present at the pre-grade conference; shall establish procedures for archaeological resource surveillance; and shall establish, in cooperation with the Contractor, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts, as appropriate. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the project Contractor, for exploration and/or salvage.

Prior to the release of the grading bond, the Contractor shall obtain approval of the Archaeologist's follow-up report from the City of Lake Forest Director of Public Works. The report shall include the period of inspection, an analysis of any artifacts found, and the present repository of the artifacts. The Contractor shall prepare excavated material to the point of identification. The Contractor shall offer excavated finds for curatorial purposes (for the portion of roadway between Commercentre Drive and Towne Centre Drive) to the City of Lake Forest Director of Public Works, or his/her designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the City of Lake Forest Director of Public Works. The Applicant shall pay curatorial fees if an applicable fee program has been adopted by the City Council, and such fee program is in effect at the time of presentation of the materials to the City of Lake Forest or its designee, all shall be in a manner meeting the approval of the City of Lake Forest Director of Public Works.

5.1.2 PALEONTOLOGICAL RESOURCES MONITORING

Prior to the issuance of any grading permit, the project Contractor shall provide written evidence to the City of Lake Forest Director of Public Works, that the Contractor has retained a qualified Paleontologist to observe grading activities and to salvage and catalogue fossils, as necessary. The Paleontologist shall be present at the pre-grade conference; shall establish procedures for paleontological resources surveillance; and shall establish, in cooperation with the Contractor, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils. If the paleontological resources are found to be significant, the Paleontologist shall determine appropriate actions, in cooperation with the Contractor, that ensure proper exploration and/or salvage.

Prior to the release of any grading bond, the Contractor shall submit the Paleontologist's follow-up report for approval by the City of Lake Forest Director of Public Works. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. The Contractor shall prepare excavated material to the point of identification. The Contractor shall offer excavated finds for curatorial purposes (for the portion of roadway between Commercentre Drive and Towne Centre Drive) to the City of Lake Forest, or its designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the City of Lake Forest Director of Public Works. The Applicant shall pay curatorial fees if an applicable fee program has been adopted by the City Council, and such fee program is in effect at the time of presentation of the materials to the City of Lake Forest or its designee, all in a manner meeting the approval of the City of Lake Forest Director of Public Works.

Paleontological monitoring is recommended during grading of the property when grading activities expose older Late Pleistocene Epoch Quaternary Period Alluvium, the Miocene Epoch Tertiary Period Monterey Formation and/or the Oso Sand member of the Late Miocene to Early Pliocene Epoch Tertiary Period Capistrano Formation.

5.1.3 HUMAN REMAINS

In accordance with California Health and Safety Code, Section 7050.5, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains. The County Coroner shall make such determination within two working days of notification of discovery. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or believed to be Native American, the County Coroner shall notify the Native American Heritage Commission in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendents shall complete their inspection within *48 hours of being granted access to the site*. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

With implementation of the mitigation program listed above, potential impacts to paleontological and archaeological resources would be reduced to a level considered less than significant. Should the extension of the wildlife corridor be implemented, the potential impacts to paleontological and archaeological resources would be reduced to a level considered less than significant.

5.2 OUTSIDE PROPOSED ALTON PARKWAY EXTENSION WITHIN BAKER RANCH

5.2.1 TESTING AND EVALUATION

Section 21083.2(a) of the CEQA Statutes and Section 15064.5(a) of the CEQA Guidelines require evaluation of cultural resources and to determine whether a project may have a significant on them. If it cannot be determined whether CA-ORA-1004 and CA-ORA-1150 were previously evaluated for significance, it is recommended that a testing program be conducted to evaluate the sites' eligibility for listing in the California Register of Historical Resources. The testing program must be designed to verify that the sites retain integrity, whether a subsurface component exists at the sites, and their areal extent. It must also evaluate the site's diversity and density of artifacts and their potential for chronological controls.

5.2.2 PRESERVATION/DATA RECOVERY EXCAVATION

Section 21083.2(b–d) of the CEQA Statutes and Section 15064.5(b & c) of the CEQA Guidelines require mitigation measures for eligible sites that would suffer significant adverse changes (damage or destruction). Reasonable effort must be made to permit these resources to remain in place. To the extent that this is not feasible, data recovery excavation is required to mitigate the significant effects of the project on significant cultural resources. Should either of the sites (CA-ORA-1004 or CA-ORA-1150) be determined significant, a data recovery excavation would ensure that a representative sample of each site is recovered. A Data Recovery Plan should be developed to detail the methods of the excavation.

5.2.3 CULTURAL RESOURCES MONITORING

Section 21083.2(i) of the CEQA Statutes and Section 15064.5(f) of the CEQA Guidelines provide for the accidental discovery of historical resources discovered during construction. Because of the three archaeological sites known to remain on the property, the general sensitivity of the project area for cultural resources and the possibility that unanticipated discoveries such as buried features (hearths, living floors, etc.) still exist in the subsurface (whether as part of the three known sites or a currently unknown site), it is recommended that monitoring of mass grading for this project be accomplished by a qualified Archaeologist who meets the Secretary of the Interior's Standards for Archaeologists (NPS 1983). In the event that cultural resources are exposed during construction, the Monitor must be empowered to temporarily halt construction in the immediate vicinity of the discovery while it is evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, additional work (such as preservation or data recovery excavation) may be warranted. A Registered Professional Archaeologist (RPA) should, at minimum, supervise any monitoring activities.

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5.2.4 PALEONTOLOGICAL RESOURCES MONITORING

Prior to the issuance of any grading permit, the project Contractor shall provide written evidence to the City of Lake Forest Director of Public Works, that the Contractor has retained a qualified Paleontologist to observe grading activities and to salvage and catalogue fossils, as necessary. The Paleontologist shall be present at the pre-grade conference; shall establish procedures for paleontological resources surveillance; and shall establish, in cooperation with the Contractor, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils. If the paleontological resources are found to be significant, the Paleontologist shall determine appropriate actions, in cooperation with the Contractor, that ensure proper exploration and/or salvage.

Prior to the release of any grading bond, the Contractor shall submit the Paleontologist's follow-up report for approval by the City of Lake Forest Director of Public Works. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. The Contractor shall prepare excavated material to the point of identification. The Contractor shall offer excavated finds for curatorial purposes (for the portion of roadway between Commercentre Drive and Towne Centre Drive) to the City of Lake Forest, or its designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the City of Lake Forest Director of Public Works. The Applicant shall pay curatorial fees if an applicable fee program has been adopted by the City Council, and such fee program is in effect at the time of presentation of the materials to the City of Lake Forest or its designee, all in a manner meeting the approval of the City of Lake Forest Director of Public Works.

Paleontological monitoring is recommended during grading of the property when grading activities expose older Late Pleistocene Epoch Quaternary Period Alluvium, the Miocene Epoch Tertiary Period Monterey Formation and/or the Oso Sand member of the Late Miocene to Early Pliocene Epoch Tertiary Period Capistrano Formation.

5.2.5 HUMAN REMAINS

In accordance with California Health and Safety Code, Section 7050.5, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains. The County Coroner shall make such determination within two working days of notification of discovery. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or believed to be Native American, the County Coroner shall notify the Native American Heritage Commission in Sacramento within 24 hours. In accordance with California Public

Resources Code, Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendents shall complete their inspection within *48 hours of being granted access to the site*. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

With implementation of the mitigation program listed above, potential impacts to paleontological and archaeological resources would be reduced to a level considered less than significant. Should the extension of the wildlife corridor be implemented, the potential impacts to paleontological and archaeological resources would be reduced to a level considered less than significant.

The CEQA checklist table is provided below:

TABLE 3
CEQA ENVIRONMENTAL CHECKLIST

Cultural Resources - Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less then Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?				**X**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		**X**		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?		**X**		
d) Disturb any human remain, including those interred outside of formal cemeteries?		**X**		

_____
Patrick O. Maxon, RPA
Director – Cultural Resources

SECTION 6.0
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APPENDIX A

PERSONNEL QUALIFICATIONS

APPENDIX B

CULTURAL RESOURCES RECORDS SEARCH RESULTS

APPENDIX C

PALEONTOLOGICAL RECORDS SEARCH RESULTS

APPENDIX D

NATIVE AMERICAN SCOPING RESULTS

CONFIDENTIAL APPENDIX E:
NOT FOR PUBLIC REVIEW

SITE LOCATIONS MAP